

WHAT IS CLAIMED IS:

- 1 1. An electronic component comprising:  
2 a wafer;  
3 a plurality of bond pads disposed on the wafer;  
4 a plurality of functional 3-D structures disposed on the wafer, each functional 3-D  
5 structure including a compliant base element;  
6 a plurality of reroute traces, each reroute trace being electrically connected to one of the  
7 bond pads and extending onto a surface of one of the functional 3-D structures; and  
8 a plurality of selected 3-D structures disposed on the wafer to provide a mechanical  
9 reinforcement, wherein at least some of the selected 3-D structures have a greater mechanical  
10 load-bearing capacity than some of the functional 3-D structures.
- 1 2. The component of claim 1 wherein each reroute trace comprises a copper/nickel layer  
2 that is covered by a gold layer.
- 1 3. The component of claim 1 wherein the selected 3-D structures have a lower degree of  
2 compressibility than the functional 3-D structures.
- 1 4. The component of claim 1 wherein the selected 3-D structures have a slightly greater  
2 height than the functional 3-D structures.
- 1 5. The component of claim 1 wherein each of the selected 3-D structures includes a  
2 compliant base element that has a significantly greater volume than the compliant base element  
3 of the functional 3-D structures.

1 6. The component of claim 1 wherein each of the selected 3-D structures is protected by a  
2 metal cap.

1 7. The component of claim 1 wherein each of the selected 3-D structures is surrounded by a  
2 metallic supporting ring.

1 8. The component of claim 1 wherein the selected 3-D structures are arranged in a regularly  
2 distributed manner in an edge region of the wafer.

1 9. The component of claim 1 wherein the selected 3-D structures are arranged in a regularly  
2 distributed manner over the wafer.

1 10. The component of claim 1 wherein the selected 3-D structures are able to be electrically  
2 bonded.

1 11. An electronic component comprising:  
2 a wafer;  
3 a plurality of bond pads disposed on the wafer;  
4 a plurality of functional 3-D structures disposed on the wafer, each functional 3-D  
5 structure including a compliant base element;  
6 a plurality of reroute traces, each reroute trace being electrically connected to one of the  
7 bond pads and extending onto a surface of one of the functional 3-D structures;  
8 a plurality of other 3-D structures disposed on the wafer to provide a mechanical  
9 reinforcement, each of the other 3-D structures having a support structure formed upon a surface  
10 of the 3-D structure.

1 12. The electronic component of claim 11 wherein the support structure comprises a metal  
2 cap disposed over an entire upper surface of the other 3-D structures.

1 13. The electronic component of claim 11 wherein the support structure comprises a metal  
2 ring formed along side surfaces of the other 3-D structures.

1 14. The electronic component of claim 11 wherein the metal ring is not disposed on any  
2 portion of an upper surface of the other 3-D structures.

1 15. The electronic component of claim 11 wherein the support structure is formed from the  
2 same material as the reroute traces.

1 16. The component of claim 11 wherein each reroute trace comprises a copper/nickel layer  
2 that is covered by a gold layer.

1 17. The component of claim 11 wherein the other 3-D structures have a lower degree of  
2 compressibility than the functional 3-D structures.

1 18. The component of claim 11 wherein the other 3-D structures have a greater height than  
2 the functional 3-D structures.

1 19. The component of claim 11 wherein each of the other 3-D structures includes a compliant  
2 base element that has a significantly greater volume than the compliant base element of the  
3 functional 3-D structures.

1 20. The component of claim 11 wherein the other 3-D structures are arranged in a regularly  
2 distributed manner in an edge region of the wafer.

1 21. The component of claim 11 wherein the other 3-D structures are arranged in a regularly  
2 distributed manner over the wafer.

1 22. A method of forming an electronic component, the method comprising:  
2 providing a wafer including a plurality of bond pads formed thereon;  
3 forming a plurality of compliant base elements over the wafer;  
4 forming a metalization over the wafer such that reroute traces are formed to electrically  
5 reroute ones of the bonds to respective ones of the compliant base elements and also such that  
6 reinforcement metalization is formed to provide a mechanical reinforcement to other ones of the  
7 compliant base elements, wherein the other ones of the compliant base elements are reinforced  
8 so as to have a greater mechanical load-bearing capacity than the respective ones of the  
9 compliant base elements.

1 23. The method of claim 22 wherein forming a plurality of compliant base elements  
2 comprises forming the other ones of the compliant base elements to have a greater height than  
3 the respective ones of the compliant base elements.

1 24. The method of claim 22 wherein forming a plurality of compliant base elements  
2 comprises forming the other ones of the compliant base elements to have a greater volume than  
3 the respective ones of the compliant base elements.

1 25. The method of claim 22 wherein forming a metalization comprises forming a metal cap  
2 over the other ones of the compliant base elements.

1 26. The method of claim 22 wherein forming a metalization comprises forming a metallic  
2 support ring around each of the other ones of the compliant base elements.

1 27. The method of claim 22 wherein forming a metalization comprises forming a  
2 copper/nickel layer that is covered by a gold layer.